

CURRICULUM VITAE

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EDUCATION

- Ph.D., Atmospheric Chemistry, Georgia Institute of Technology, 08/2000
- M.S., Atmospheric Physics, Nanjing University, China, 07/1992
- B.S., Atmospheric Physics, Nanjing University, China, 07/1989

EMPLOYMENT HISTORY

- Assistant Research Scientist, Goddard Earth Science and Technology Center, University of Maryland Baltimore County and NASA Goddard Space Flight Center, 10/2004 -
- Research Scientist II, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, 2003 – 10/2004
- Post-Doctoral Fellow, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, 2000 - 2002
- Research Assistant, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, 1996 – 2000

RESEARCH INTERESTS

- Aerosol radiative forcing and climate
- Aerosol-cloud interactions
- Aerosol assimilation
- Tropospheric chemistry and air pollution
- Boundary layer meteorology

REFERRED PUBLICATIONS

- **Yu, H.**, Y.J. Kaufman, M. Chin, G. Feingold, L. Remer, T. Anderson, Y. Balkanski, N. Bellouin, O. Boucher, S. Christopher, P. DeCola, R. Kahn, D. Koch, N. Loeb, M.S. Reddy, M. Schulz, T. Takemura, and M. Zhou, A review of measurement-based assessment of aerosol direct radiative effect and forcing, *Atmospheric Chemistry and Physics Discussion*, 5, 7647-7768, 2005. SRef-ID: 1680-7375/acpd/2005-5-7647.
- **Yu, H.**, R. Fu, R.E. Dickinson, Y. Zhang, M. Chen, and H. Wang, How Amazon smoke modifies warm cloud cover and droplet sizes as inferred from MODIS retrievals and meteorological data, submitted to *Journal of Geophysical Research*, 2005.
- Zhou, M., **H. Yu**, R.E. Dickinson, O. Dubovik, and B. Holben, A normalized description of the direct effect of key aerosol types on solar radiation as estimated from AERONET aerosols and MODIS albedos, *Journal of Geophysical Research*, 110, D19202,

doi:10.1029/2005JD005909, 2005.

- Anderson, T.L., R.J. Charlson, N. Bellouin, O. Boucher, M. Chin, S.A. Christopher, J. Haywood, Y.J. Kaufman, S. Kinne, J.A. Ogren, L.A. Remer, T. Takemura, D. Tanre, O. Torres, C.R. Trepte, B.A. Wielicki, D.M. Winker, **H. Yu**, A-Train strategy for quantifying direct climate forcing by aerosols, *Bulletin of American Meteorological Society*, Vol. 86, December, 2005.
- Matsui, T., S. Kreidenweis, R.A. Pielke Sr., B. Schichtel, **H. Yu**, M. Chin, A. Chu, and D. Niyogi (2004), Regional comparison and assimilation of GOCART and MODIS aerosol optical depth across the eastern U.S., *Geophysical Research Letters*, 31, L21101, doi:10.1029/2004GL021017.
- **Yu, H.**, R.E. Dickinson, M. Chin, Y.J. Kaufman, M. Zhou, L. Zhou, Y. Tian, O. Dubovik, and B.N. Holben (2004), The direct radiative effect of aerosols as determined from a combination of MODIS retrievals and GOCART simulations, *Journal of Geophysical Research*, 109, D03206, doi:10.1029/2003JD003914.
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- Zhou, L., Dickinson, R.E., Tian, Y., Jin, M., Ogawa, K., **Yu, H.**, and Schmugge, T. (2003), A sensitivity study of climate and energy balance simulations with use of satellite derived emissivity data over the northern Africa and the Arabian peninsula. *Journal of Geophysical Research*, 108(D24), 4795, doi:10.1029/2003JD004083.
- **Yu, H.**, R.E. Dickinson, M. Chin, Y.J. Kaufman, B.N. Holben, I.V. Geogdzhayev, and M.I. Mishchenko (2003): Annual cycle of global distributions of aerosol optical depth from integration of MODIS retrievals and GOCART model simulations. *Journal of Geophysical Research*, 108(D3), 4128, doi:10.1029/2002JD002717.
- Zhou, L., Dickinson, R.E., Tian, Y., Zeng, X., Dai, Y., Yang, Z., Schaaf, C.B., Gao, F., Jin, Y., Strahler, A., Myneni, R.B., **Yu, H.**, Wu, W., and Shaikh, M., Comparison of seasonal and spatial variations of albedos from Moderate-Resolution Imaging Spectroradiometer (MODIS) and Common Land Model. *Journal of Geophysical Research*, 108(D15), 4488, doi:10.1029/2002JD003326, 2003.
- **Yu, H.**, S.C. Liu, and R.E. Dickinson (2002): Radiative effects of aerosols on the evolution of the atmospheric boundary layer. *Journal of Geophysical Research*, 107(D12), 4142, doi:10.1029/2001JD000754.
- Wang Yuhang, Shaw C. Liu, **H. Yu**, Scott T. Sandholm, Donald R. Blake, and Tai-Yie Chen (2000): Influence of convection and biomass burning on tropospheric chemistry over the tropical Pacific. *Journal of Geophysical Research*, 105, 9321-9333.
- Chameides W.L., **H. Yu**, S.C. Liu, M. Bergin, X. Zhou, L. Mearns, W. Gao, C.S. Kiang, R. Saylor, Chao Luo, Yan Huang, A. Steiner, and F. Giorgi (1999): A case study of the effect of atmospheric aerosols and regional haze on agriculture: An opportunity to enhance crop yields in China through emission controls? *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 96 (24), 13626-13633.
- Liu S.C., **H. Yu**, B. Ridley, Y. Wang, D.D. Davis, Y. Kondo, M. Koike, B.E. Anderson, G.W. Sachse, G.L. Gregory, H. Fuelburg, A. Thompson, and H. Singh (1999): Sources of

reactive nitrogen in the upper troposphere during SONEX. *Geophysical Research Letters*, 26, 2441-2444.

- Jiang Weimei, **H. Yu**, and Xin Li (1999): Random walk modeling of wake dispersion for the exhaust tower of an underground tunnel in urban area. *Journal of Environmental Sciences*, 11(4), 474-479.
- Jiang Weimei, **H. Yu**, Guoliang Xie, Jian Wu, Honggui Zhu, and Hening Sun (1998): An experimental study on environmental impact of automobile exhaust from urban transportation tunnels. *Acta Scientiae Circumstantiae*, 18(2), 188-193.
- **Yu, H.**, and Weimei Jiang (1996): Lagrangian simulation of buoyant-plume dispersion in the convective boundary layer. *Scientia Atmospherica Sinica*, 20(6), 745-750.
- **Yu, H.**, and Weimei Jiang (1996): Dispersion of air pollutants in the wake area of exhaust tower in Shanghai city. *Acta Aerodynamica Sinica*, 14(3), 349-354.
- **Yu, H.**, Hongnian Liu, and Weimei Jiang (1996): Experimental study on flow and dispersion in an open mine-pit. *Journal of Nanjing University*, 32, 219-223.
- **Yu, H.**, and Weimei Jiang (1996): A model for dust dispersion in the convective boundary layer. *Journal of Nanjing University*, 32 (Natural Disaster Special Edition), 247-252.
- Liu Hongnian, **H. Yu**, and Weimei Jiang (1996): Three-dimensional Modeling of flow and dispersion characteristics over a hill. *Journal of Nanjing University*, 32, 39-42.
- Wang Shuyu, **H. Yu**, Weimei Jiang, Xiaoping Lu, and Ruming Zhou (1996): Experimental study on wind and turbulence in shoreline environment. *Journal of Nanjing University*, 32, 308-313.
- Jiang Weimei, and **H. Yu** (1994): Study on the thermal internal boundary layer and dispersion of air pollutant in coastal area by numerical simulation. *Advances in Atmospheric Sciences*, 11(3), 285-290.
- **Yu, H.**, and Weimei Jiang (1994): A mesoscale simulation system for atmospheric dispersion in shoreline area. *Acta Scientiae Circumstantiae*, 14(2), 191-197.
- **Yu, H.**, and Weimei Jiang (1994): Observational study of turbulent characteristics in the atmospheric surface layer over lake-shore area. *Journal of Nanjing University*, 30, 369-374.
- **Yu, H.**, and Weimei Jiang (1994): Application of random walk model to the assessment of regional atmospheric environmental impacts. *Electrical Power Environmental Protection*, 10(1), 20-30.
- Jiang Weimei, Guoliang Xie, and **H. Yu** (1994): Fluid modeling of atmospheric diffusion from an elevated point source with trace gas in wind tunnel. *Journal of Nanjing University*, 30, 227-234.
- **Yu, H.**, and Weimei Jiang (1993): A stochastic model for prediction of fumigation dispersion in coastal area. *Scientia Atmospherica Sinica*, 17(5), 629-635.
- Jiang Weimei, **H. Yu**, and Xiaomin Wu (1993): A practical puff trajectory model with wind shear for regional multi-source application. *Scientia Meteorological Sinica*, 13(2), 137-145.
- **Yu H.**, and Weimei Jiang (1992): A new formula of atmospheric pollution coefficient and its application. *China Environmental Science*, 12(5), 389-392.
- Jiang Weimei, **H. Yu**, and Weifang Cai (1991): Fluid modeling experiment in wind tunnel for atmospheric environment and air pollution in PBL. *Scientia Meteorological Sinica*, 11(3), 272-282.

BOOK CHAPTERS

- Jiang Weimei, Yumao Xu, and **H. Yu**: Fundamentals of Boundary Layer Meteorology, ISBN 7-305-2589-4, *Nanjing University Press*, Nanjing, China, 1994.

CONFERENCE PROCEEDINGS/PRESENTATIONS

- **Yu, H.**, Y.J. Kaufman, M. Chin, L.A. Remer, N. Bellouin, O. Boucher, S. Christopher, R. Kahn, N. Loeb, Comparisons of Terra-based estimates of aerosol direct effect, *Terra Data Fusion Meeting*, Williamsburg, VA, August 15-17, 2005.
- **Yu, H.**, M. Chin, Y.J. Kaufman, et al., Satellite Data and Global Model Integration of Global Distribution of Aerosols to Estimate the Aerosol Radiative Forcing, *MODIS Science Team Meeting*, Baltimore, MD, March 22-24, 2005
- **Yu, H.**, R.E. Dickinson, Mian Chin, Y.J. Kaufman et al., Direct radiative effect of aerosols as determined from a combination of MODIS retrievals and GOCART simulations, *NASA/GSFC Aerosol Update ("Highlights of 2004" Session)*, Greenbelt, MD, January 7, 2005.
- **Yu, H.**, R. Fu, and R.E. Dickinson, Dynamical and thermodynamic controls on smoke-cloud interactions over the Amazon, *3rd AEROCOM workshop*, New York City, New York, December 1-3, 2004.
- Mi Zhou, **H. Yu**, R.E. Dickinson, O. Dubovik, and B.N. Holben, AERONET-based climatology of clear-sky direct solar radiative effect and its applications , *3rd AEROCOM workshop*, New York City, New York, December 1-3, 2004.
- **Yu, H.**, Y. Kaufman, M. Chin, M. Zhou, L. Remer, R.E. Dickinson, Q. Tan, A Synergy analysis of global aerosols and assessment of direct radiative effect, *American Geophysical Union (AGU) Fall Meeting*, San Francisco, California, December 13-17, 2004.
- **Yu, H.**, Influences of biomass burning smoke on land-atmosphere interaction and cloud, NASA Goddard Space Flight Center, AEROCENTER, Greenbelt, Maryland, April 16, 2004.
- Yan Zhang, **H. Yu**, R. Fu, Influences of biomass burning on land-atmosphere interactions and dry-to-wet transition over Amazonia, *AGU Fall Meeting*, San Francisco, California, December 13-17, 2004.
- Mi Zhou, **H. Yu**, Robert E. Dickinson, Oleg Dubovik, Brent Holben, Yoram Kaufman, Mian Chin, Lorraine Remer, AERONET-based estimates of direct solar radiative effect of key aerosol types, *AGU Fall Meeting*, San Francisco, California, December 13-17, 2004.
- **Yu, H.**, Yan Zhang, R.E. Dickinson, Rong Fu, Simulations of smoke-land-atmosphere interactions over forest and pasture, AGU 2003 Fall meeting, San Francisco, December 8-12, 2003.
- Zhou, Mi, **H. Yu**, and R.E. Dickinson: Application of MODIS land albedo to estimate of aerosol direct radiative forcing, Solar Radiation and Climate Gordon Conference, July 13-18, 2003, New London, NH.
- **Yu, H.**: Impacts of aerosols on the land-air interactions. NASA Goddard Space Flight Center, AEROCENTER, Greenbelt, Maryland, March 20, 2002.
- **Yu, H.**, S.C. Liu, and R.E. Dickinson (2001): Radiative effects of aerosols on the evolution of the atmospheric boundary layer. *EOS Trans.*, AGU 2001 Spring Meeting, A51B-03, Boston, Mass., May 29 – June 2, 2001.

- Liu S.C., and **H. Yu** (1999): Modelling the vertical distributions of non-methan hydrocarbons and their potential impact on the background atmosphere. in *NATO Report V-102*, KFA, pp.125-136, Juelich, Germany.

PROFESSIONAL SERVICES

- Reviewer for scientific journals:
 - ◆ Journal of Geophysical Research-Atmospheres
 - ◆ Geophysical Research Letters
 - ◆ Advances in Atmospheric Sciences
 - ◆ IEEE Transactions on Geoscience and Remote Sensing
 - ◆ Terrestrial, Atmospheric and Oceanic Sciences
 - ◆ Journal of Environmental Modeling and Software
- Reviewer for funding agencies:
 - ◆ National Science Foundation
 - ◆ Netherlands Organization for Scientific Research NOW
 - ◆ Lawrence Livermore National Laboratory

HONORS, AWARDS, AND RECOGNITIONS

- Research Excellence Award, EAS, Georgia Institute of Technology
- Award for Advance in Science and Technology, National Education Commission of China
- Teaching Excellence Award, Nanjing University, China
- Excellent Student Coordinator Honor, Nanjing University, China
- Yingsong Junior Faculty Award, Nanjing University, China

MEMBERSHIP

- American Geophysical Union
- American Meteorological Society